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EXAMINER
ANDREWS, LEON T

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 November 2009</u>.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-11</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>1-11</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   **Claims 1-8 and 10** are rejected under 35 U.S.C. 102 (e) by Onoe et al. (Pub. No.: US

2005/0163130 A1).

Regarding Claim 1, Onoe at al. discloses a transmission device (transmitter for performing

packet communication, ¶ [0032], page 1, lines 2-5) conducting communication with

predetermined quality ensured, comprising:

a classification unit (transmitter for adding header and data portion of the packet, ¶

[0015], page 2, lines 1-3) classifying a packet of data to be transmitted (Fig. 5, classify by

packets; transmission packets are classified into packets, ¶ [0086], page 6, lines 1-2) according to

each packet header (transmission side packet header contains class information, ¶ [0014], page 2,

lines 2-4; Header added to the packet to be transmitted, ¶ [0015], page 2, lines 1-2),

a determination unit (Fig. 5, relay node detects the packet identifier, ¶ [0015], page 2,

lines 4-5) organizing a set of packets having the same packet header as a packet group according

to a classified result by said classification unit, and determining whether to be transmitted with a

bandwidth guaranteed according to a bit rate of the packet group (packet identifier from the

packet header decides the related packet is guaranteed in bandwidth and transfer the related

packet in a bandwidth set at a bandwidth speed of the bandwidth guaranteed packet, ¶ [0015],

page 2, lines 5-11), and

a request unit (identifier from the packet communication, ¶ [0015], page 2, lines 4-5)

requesting a bandwidth control device to reserve a bandwidth for a packet group determined to

be transmitted with a bandwidth guaranteed (packet identifier from the packet header decides

that the related packet is guaranteed in bandwidth and transferred in a bandwidth set of the

guaranteed bandwidth, ¶ [0015], page 2, lines 5-9) by said determination unit.

Regarding Claim 2, Onoe at al. discloses the transmission device according to claim 1, wherein

said determination unit comprises

a measurement unit (table with identifier, ¶ [0011], page 1, line 2) measuring the bit rate

per predetermined unit time (bit rate data transfer where the transfer speed of the data is

represented by 100 bps, ¶ [0011], page 1, lines 9-11; packet transfer speed at the time the

identifier is added and the related packet is transferred, ¶ [0015], page 2, lines 4-10) of said

packet group,

a calculation unit (table with guaranteed bandwidth, ¶ [0011], page 1, lines 2-3)

calculating a parameter representing variation in the bit rate with a latest predetermined number

of data to be a subject from a measured result by said measurement unit (Fig. 3, packet indicated

by a guaranteed bandwidth is represented by a bit rate of data transfer speed whereby the packet

is transferred with respect to the requested transfer speed, ¶ [0011], page 1, lines 9-16), and

a packet determination unit (relay node identifies/detects the packet, ¶¶ [0011] and

[0015], page 1, line 13 and page 2, lines 4-5 respectively) determining that the packet group is a

packet group to be transmitted with a bandwidth guaranteed when the parameter calculated by

said calculation unit is at most a preset value (guaranteed bandwidth of the packets to be

transferred represented by numerals with respect to a requested transfer speed, ¶ [0011], page 1,

lines 11-17; packet in a bandwidth set of the guaranteed bandwidth is transferred at a constant

speed (preset value) of the bandwidth guaranteed packet, ¶ [0015], page 2, lines 6-11).

Regarding Claim 3, Onoe at al. discloses the transmission device according to claim 2, wherein

said

      calculation unit increases the number of data to be the subject of calculation when the

calculated parameter is larger than a preset value and recalculates the parameter (packets

indicated by bandwidth guarantee of 100 and 150 represented by data of 100 and 150

respectively are represented by numerals proportional to the guaranteed bandwidth with respect

to the requested transfer speed, ¶ [0011], page 1, lines 5-17), and

      said packet determination unit determines that the packet group is the packet group to be

transmitted with a bandwidth guaranteed when a value of said recalculated parameter is at most

the preset value (guaranteed bandwidth of the packets to be transferred represented by numerals

with respect to a requested transfer speed, ¶ [0011], page 1, lines 11-17; packet in a bandwidth

set of the guaranteed bandwidth is transferred at a constant speed (preset value) of the

bandwidth guaranteed packet, ¶ [0015], page 2, lines 6-11)..

Regarding Claim 4, Onoe at al. discloses the transmission device according to claim 2, wherein

said calculation unit repeats calculation of the parameter until the parameter becomes at most the

preset value (Fig. 3, packets indicated by bandwidth guarantee of 100 and 150 represented by

data 100 and 150 represented by numerals and performing packet communication with respect to

the requested speed, ¶ [0011], page 1, lines 5-17), or said number of data to be the subject

becomes a maximum that is determined in advance, while sequentially increasing the number of

data to be the subject.

Regarding Claim 5, Onoe at al. discloses a transmission device conducting communication with

predetermined quality ensured, comprising:

a classification unit classifying a packet of data to be transmitted (transmission packets

are classified into packets, ¶ [0086], page 6, lines 1-2) according to each packet header

(transmission side packet header contains class information, ¶ [0014], page 2, lines 2-4),

a determination unit organizing a set of packets having the same packet header as a

packet group according to a classified result by said classification unit, and determining whether

to transmit with a bandwidth of said packet group ensured (packet identifier from the packet

header decides the related packet is guaranteed in bandwidth and transfer the related packet in a

bandwidth set at a bandwidth speed of the bandwidth guaranteed packet, ¶ [0015], page 2, lines

5-11), and

a request unit requesting a bandwidth control device to reserve a bandwidth for a packet

group (packet identifier from the packet header decides that the related packet is guaranteed in

bandwidth and transferred in a bandwidth set of the guaranteed bandwidth, ¶ [0015], page 2,

lines 5-9),

wherein said determination unit calculates a buffer capacity required when a packet group

is to be transmitted in a specific bandwidth (bandwidth guarantee set with respect to

communication is assigned a queue, ¶ [0015], page 2, lines 1-3; queue prepared for the

bandwidth contains a buffer for holding the packet data, ¶ [0018], page 2, lines 1-4), performing

the calculation with the bandwidth changed (packets indicated by bandwidth guarantee of data

100 and 150 are represented by numerals proportional to the guaranteed bandwidth, ¶ [0011],

page 1, lines 5-13), deriving a relationship between a required bandwidth and a required buffer

capacity (queues prepared for the bandwidth contains a buffer for holding the packet data, ¶

[0018], page 2, lines 1-4), and determining whether the packet group is a packet group to be

transmitted with a bandwidth guaranteed from said relationship (bandwidth guarantee set with

respect to communication contains packet data to be transferred, ¶ [0015], page 2, lines 1-7).

Regarding Claim 6, Onoe at al. discloses the transmission device according to claim 5, wherein

said determination unit extracts a maximum value of the buffer capacity required for each

requested bandwidth (packet bandwidth to actively use the resources to the highest limit in an

effort to raising the transfer speed of the packets as much as possible, ¶ [0026], page 2, lines 4-7;

with the queues prepared for the bandwidth containing a buffer for the packet data, ¶ [0018],

page 2, lines 1-4), and determines whether the packet group is a packet group to be transmitted

with a bandwidth guaranteed (bandwidth guarantee set with respect to communication contains

packet data to be transferred, ¶ [0016], page 2, lines 1-7) depending upon whether a graph

representing a relationship between a requested bandwidth and the maximum value of the

required buffer capacity is within a predetermined region or not (Fig. 3, packets indicated by

bandwidth guarantee of 100, 150, represented by proportional numerals performing the packet

communication in the guaranteed bandwidth, ¶ [0011], page 1, lines 5-15).

Regarding Claim 7, Onoe at al. discloses the transmission device according to claim 6, wherein

said determination unit causes said request unit to request a bandwidth in said predetermined

region (bandwidth requested set by the predetermined packet for certain communication, ¶

[0024], page 2, lines 2-6), and requests a buffer unit to ensure the maximum value of the buffer

capacity (bandwidth guarantee set with respect to communication is assigned a queue, ¶ [0015],

page 2, lines 1-3; queue prepared for the bandwidth contains a buffer for holding the packet data,

¶ [0018], page 2, lines 1-4) in said predetermined region.

Regarding Claim 8, Onoe at al. discloses the transmission device according to claim 7, wherein

said determination unit determines the bandwidth to be requested (bandwidth requested set by

the predetermined packet for certain communication, ¶ [0024], page 2, lines 2-6) and the buffer

capacity (queue prepared for the bandwidth contains a buffer for holding the packet data, ¶

[0018], page 2, lines 1-4) to be ensured such that a total cost is minimized based on a cost

required to ensure the bandwidth (value as the set guaranteed bandwidth, ¶ [0090], page 6, lines

2-6)) and a cost of the buffer capacity (value as the buffer, ¶ [0090], page 6, line 12).

Regarding Claim 10, Onoe at al. discloses the transmission device according to claim 1,

wherein, when there is a change of at least a predetermined criterion in characteristics of a bit

rate of a packet group once determined to be transmitted with a bandwidth guaranteed by said

determination unit, said request unit requests said bandwidth control device to modify the bit rate

of the bandwidth guaranteed for the packet group to the latest value (with respect to packet at a

transfer speed, bit rate data transfer packet indicated by bandwidth guaranteed 100 and transfer

speed of 100 bps with packet indicated by guaranteed bandwidth 150 and transfer speed of 150

bps, the packets represented by numerals proportional to the guaranteed bandwidth, ¶ [0011],

page 1, lines 5-17).

2.   **Claims 9 and 11** are rejected under 35 U.S.C. 103(a) by Onoe et al. in view of Rogers

(Pub. No.: US 2001/0036181 A1).

Regarding Claim 9, Onoe at al. discloses the transmission device according to claim 1, wherein,

when determination is made by said determination unit that a packet group once determined to

be transmitted with a bandwidth guaranteed (related packet is guaranteed in bandwidth and

transferred in a bandwidth set of the guaranteed bandwidth, ¶ [0015], page 2, lines 6-9) is not

observed for a predetermined time and is no longer necessary to ensure the bandwidth (at time of

packet communication related packet not guaranteed in bandwidth, ¶ [0015], page 2, lines 4-7; at

time of packet transmission packet is controlled with respect to the queue and transfer carried out

with priority in bandwidth unguaranteed packets, ¶ [0021], page 2, lines 7-12), said request unit

requests said bandwidth control device to release the bandwidth guaranteed for the packet group

(set bandwidth discarded and with bandwidth unguaranteed at speed more than the set bandwidth

transfer is not carried out, ¶ [0028], page 3, lines 5-8).

Onoe et al. fails to disclose release the bandwidth.

But, Rogers discloses released the bandwidth, ¶ [0025], page 3, line11.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

the invention was made to use Rogers's release the bandwidth because this would have allowed

the system to guarantee the use and releasing of the bandwidth for use to another application, ¶ [0025], page 3, lines 9-11.

Regarding Claim 11, Onoe at al. discloses the transmission device according to claim 1, wherein, when there is a change of at least a predetermined criterion in characteristics of a bit rate of a packet group once determined to be transmitted with a bandwidth guaranteed by said determination unit, said request unit requests said bandwidth control device (with respect to packet at a transfer speed, bit rate data transfer packet indicated by bandwidth guaranteed 100 and transfer speed of 100 bps with packet indicated by guaranteed bandwidth 150 and transfer speed of 150 bps, ¶ [0011], page 1, lines 5-17) to release the bandwidth guaranteed for said packet group (set bandwidth discarded and the is not carried out, ¶ [0028], page 3, lines 6-8).

Onoe et al. fails to disclose release the bandwidth.

But, Rogers discloses released the bandwidth, ¶ [0025], page 3, line11.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Rogers's release the bandwidth because this would have allowed the system to guarantee the use and releasing of the bandwidth for use to another application, ¶ [0025], page 3, lines 9-11.

Response to Arguments

3.   Applicant's arguments filed November 6, 2009 have been considered as follows:

-        In the remarks on pages 3-4 of the amendment, applicant contends that Onoe

         et al. fails to teach or suggest: (1) request unit requesting a bandwidth control

         device to reserve a bandwidth for a packet group, and (2) determination unit

         organizing a set of packets having the same packet header as a packet group

         according to a classified result by said classification unit, and determining

         whether to be transmitted with a bandwidth guaranteed according to a bit rate

         of the packet group.

-        The examiner respectfully clarifies the claim limitation and additionally states

         that Onoe et al. discloses: (1) a request unit (relay node from the packet

         communication detecting packet identifier, ¶ [0015], page 2, lines 4-5)

         requesting a bandwidth control device (router with bandwidth guarantee, ¶

         [0016], page 2, line 1) to reserve a bandwidth for a packet group (router with

         bandwidth guarantee with respect to a private queue (group) assigned for the

         identifier, ¶ [0016], page 2, lines 1-3; router a special purpose queue (group)

         prepare for packet indicated by identifier, ¶ [0017], page 2, lines 1-3, and (2)

         packet determination unit (relay node identifies/detects the packet, ¶¶ [0011]

         and [0015], page 1, line 13 and page 2, lines 4-5 respectively) determining

         that the packet group is a packet group to be transmitted with a bandwidth

         guaranteed (router with bandwidth guarantee with respect to a private queue

         (group) assigned for the identifier, ¶ [0016], page 2, lines 1-3; router a special

         purpose queue (group) prepare for packet indicated by identifier, ¶ [0017],

         page 2, lines 1-3) when the parameter calculated by said calculation unit is at

most a preset value (guaranteed bandwidth of the packets to be transferred

represented by numerals with respect to a requested transfer speed, ¶ [0011],

page 1, lines 11-17; packet in a bandwidth set of the guaranteed bandwidth is

transferred at a constant speed of the bandwidth guaranteed packet, ¶ [0015],

page 2, lines 6-11)

Conclusion

4.   **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of

the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to LEON ANDREWS whose telephone number is (571)270-1801.

The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Rao S. Seema can be reached on (571) 272-3174. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin C. Harper/

Primary Examiner, Art Unit 2462

LA/la
March 3, 2010